

Course of Study Computational Science and Engineering (Study Cohort w18)

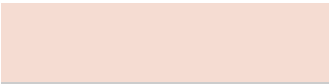
Sample course plan M Bachelor Computational Science and Engineering (IIWBS)
Specialisation Computer Science

Legend:

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|--|------------------------------------|---------------------------|------------------------------|
| Core qualification Compulsory | Specialisation Compulsory | Focus Compulsory | Thesis Compulsory |
| Core qualification Elective Compulsory | Specialisation Elective Compulsory | Focus Elective Compulsory | Interdisciplinary complement |

| LP | Semester 1 | FormHrs/wk | Semester 2 | FormHrs/wk | Semester 3 | FormHrs/wk | Semester 4 | FormHrs/wk | Semester 5 | FormHrs/wk | Semester 6 | FormHrs/wk | | | | | | |
|----|---|--|--|-------------------------------|---|-----------------------------------|---|------------|--|------------|--|------------------|--|---|-------------------------------|---|--|-----------------------------------|
| 1 | Discrete Algebraic Structures | VL 2 | Electrical Engineering II: Alternating Current Networks and Basic Devices | VL 3 | Engineering Mechanics I | VL 3 | Engineering Mechanics II | VL 3 | Seminars Computer Science and Mathematics | VL 3 | Stochastics | VL 2 | | | | | | |
| 2 | | | | | | | | | | | | | Discrete Algebraic Structures | Electrical Engineering II: Alternating Current Networks and Basic Devices | Engineering Mechanics I | Engineering Mechanics II | Seminar Computational Engineering Science | Stochastics |
| 3 | | | | | | | | | | | | | Discrete Algebraic Structures | Electrical Engineering II: Alternating Current Networks and Basic Devices | Engineering Mechanics I | Engineering Mechanics II | Seminar Computer Science/Mathematics | Stochastics |
| 4 | | | | | | | | | | | | | Discrete Algebraic Structures | Electrical Engineering II: Alternating Current Networks and Basic Devices | Engineering Mechanics I | Engineering Mechanics II | Seminar Computer Science/Engineering Mathematics | Stochastics |
| 5 | | | | | | | | | | | | | Discrete Algebraic Structures | Electrical Engineering II: Alternating Current Networks and Basic Devices | Engineering Mechanics I | Engineering Mechanics II | Seminar Computer Science/Engineering Mathematics | Stochastics |
| 6 | | | | | | | | | | | | | Discrete Algebraic Structures | Electrical Engineering II: Alternating Current Networks and Basic Devices | Engineering Mechanics I | Engineering Mechanics II | Seminar Computer Science/Engineering Mathematics | Stochastics |
| 7 | Procedural Programming | VL 1 | Objectoriented Programming, Algorithms and Data Structures | VL 4 | Numerical Mathematics I | VL 2 | Signals and Systems | VL 3 | Introduction to Control Systems | VL 2 | Solvers for Sparse Linear Systems | VL 2 | | | | | | |
| 8 | | | | | | | | | | | | | Procedural Programming | Objectoriented Programming, Algorithms and Data Structures | Numerical Mathematics I | Signals and Systems | Introduction to Control Systems | Solvers for Sparse Linear Systems |
| 9 | | | | | | | | | | | | | Procedural Programming | Objectoriented Programming, Algorithms and Data Structures | Numerical Mathematics I | Signals and Systems | Introduction to Control Systems | Solvers for Sparse Linear Systems |
| 10 | | | | | | | | | | | | | Procedural Programming | Objectoriented Programming, Algorithms and Data Structures | Numerical Mathematics I | Signals and Systems | Introduction to Control Systems | Solvers for Sparse Linear Systems |
| 11 | | | | | | | | | | | | | Procedural Programming | Objectoriented Programming, Algorithms and Data Structures | Numerical Mathematics I | Signals and Systems | Introduction to Control Systems | Solvers for Sparse Linear Systems |
| 12 | Procedural Programming | Objectoriented Programming, Algorithms and Data Structures | Numerical Mathematics I | Signals and Systems | Introduction to Control Systems | Solvers for Sparse Linear Systems | | | | | | | | | | | | |
| 13 | Electrical Engineering I: Direct Current Networks and Electromagnetic Fields | VL 3 | Automata Theory and Formal Languages | VL 2 | Computer Engineering | VL 3 | Embedded Systems | VL 3 | Numerics and Computer Algebra | VL 2 | Mathematical Statistics | VL 3 | | | | | | |
| 14 | | | | | | | | | | | | | Electrical Engineering I: Direct Current Networks and Electromagnetic Fields | Automata Theory and Formal Languages | Computer Engineering | Embedded Systems | Numerical Mathematics and Computer Algebra | Mathematical Statistics |
| 15 | | | | | | | | | | | | | Electrical Engineering I: Direct Current Networks and Electromagnetic Fields | Automata Theory and Formal Languages | Computer Engineering | Embedded Systems | Numerical Mathematics and Computer Algebra | Mathematical Statistics |
| 16 | | | | | | | | | | | | | Electrical Engineering I: Direct Current Networks and Electromagnetic Fields | Automata Theory and Formal Languages | Computer Engineering | Embedded Systems | Numerical Mathematics and Computer Algebra | Mathematical Statistics |
| 17 | Electrical Engineering I: Direct Current Networks and Electromagnetic Fields | Automata Theory and Formal Languages | Computer Engineering | Embedded Systems | Numerical Mathematics and Computer Algebra | Mathematical Statistics | | | | | | | | | | | | |
| 18 | Electrical Engineering I: Direct Current Networks and Electromagnetic Fields | Automata Theory and Formal Languages | Computer Engineering | Embedded Systems | Numerical Mathematics and Computer Algebra | Mathematical Statistics | | | | | | | | | | | | |
| 19 | Mathematics I | VL 2 | Foundations of Management | VL 3 | Computernetworks and Internet Security | VL 3 | Graph Theory and Optimization | VL 2 | Combinatorial Structures and Algorithms | VL 3 | Bachelor Thesis | | | | | | | |
| 20 | | | | | | | | | | | | Linear Algebra I | Introduction to Management | Computer Networks and Internet Security | Graph Theory and Optimization | Combinatorial Structures and Algorithms | | |
| 21 | | | | | | | | | | | | Linear Algebra I | Management Tutorial | Computer Networks and Internet Security | Graph Theory and Optimization | Combinatorial Structures and Algorithms | | |
| 22 | | | Linear Algebra I | Management Tutorial | Computer Networks and Internet Security | Graph Theory and Optimization | Combinatorial Structures and Algorithms | | | | | | | | | | | |
| 23 | | | Linear Algebra I | Management Tutorial | Computer Networks and Internet Security | Graph Theory and Optimization | Combinatorial Structures and Algorithms | | | | | | | | | | | |
| 24 | | | Analysis I | Management Tutorial | Computer Networks and Internet Security | Graph Theory and Optimization | Combinatorial Structures and Algorithms | | | | | | | | | | | |
| 25 | | | Analysis I | Management Tutorial | Computer Networks and Internet Security | Graph Theory and Optimization | Combinatorial Structures and Algorithms | | | | | | | | | | | |
| 26 | Analysis I | Management Tutorial | Computer Networks and Internet Security | Graph Theory and Optimization | Combinatorial Structures and Algorithms | | | | | | | | | | | | | |
| 27 | | | Mathematics II | VL 2 | Mathematics III | VL 2 | Mathematics IV | VL 2 | | | | | | | | | | |
| 28 | | | | | | | | | | | Linear Algebra II | Analysis III | Complex Functions | | | | | |
| 29 | | | | | | | | | | | Linear Algebra II | Analysis III | Complex Functions | | | | | |
| 30 | | | | | | | | | | | Linear Algebra II | Analysis III | Complex Functions | | | | | |
| 31 | | | Analysis II | VL 2 | Differential Equations 1 | VL 2 | Differential Equations 2 | VL 2 | | | | | | | | | | |

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|----|-------------|------|--------------------------|------|--------------------------|------|
| 30 | Analysis II | HÜ 1 | Differential Equations 1 | UE 1 | Differential Equations 2 | UE 1 |
| 31 | Analysis II | UE 1 | Differential Equations 1 | HÜ 1 | Differential Equations 2 | HÜ 1 |
| 32 | | | | | | |



Nontechnical Complementary Courses for Bachelors (from catalogue) - 6LP

The choice of courses from the catalogue is flexible (depends on the semestral work load), provided the necessary number of required credits is reached.